AMENDMENTS TO THE SPECIFICATION

- Please amend page 2, line 37, as follows:

FIG. 5 is a flow diagram of an enhancement of FIG. 3~~;~~ and

- Please amend the paragraph beginning on page 3, line 37, as follows:

When, at step 302, 'c' cells have been optimized, the system calculates an interference level and associated statistical data for the first cell, I_{cell1}~~, is calculated~~ (step 304) as follows.

- Please amend the paragraphs beginning on page 5, line 23, and ending on page 6, line 21, as follows:

The first probability can be expressed as:

$P\{h_2\}$ = P{Both cell 1 and cell 2 hop to the same frequency} = P{cells 1 and 2 hop to f_1} OR P{cells 1 and 2 hop to f_2} OR P{cells 1 and 2 hop to f_3}

$$=\frac{1}{4}\cdot\frac{1}{3}+\frac{1}{4}\cdot\frac{1}{3}+\frac{1}{4}\cdot\frac{1}{3}=\frac{1}{4}$$

Similarly, it is also possible to calculate a second probability of the first cell 102 hopping to a substantially identical frequency as the third cell 106.

The second probability can be expressed as:

$P\{h_3\}$ = P{Both cell 1 and cell 3 hop to the same frequency} = P{cells 1 and 3 hop to f_2} OR P{cells 1 and 3 hop to f_3} OR P{cells 1 and 3 hop to f_4}

$$=\frac{1}{4}\cdot\frac{1}{3}+\frac{1}{4}\cdot\frac{1}{3}+\frac{1}{4}\cdot\frac{1}{3}=\frac{1}{4}$$

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It should be appreciated that the values of the first and second probabilities will depend upon the number of frequencies in common between the first, second and third sets 200, 202, 204 of frequencies and the number of frequencies used for hopping. The first and second probabilities can be calculated according to any method known in the art.

- Please amend the paragraph beginning on page 7, line 37, as follows:

When, at step 302, less than 'c' cells have been optimized, the system proceeds to step 308 and a probability density function (PDF) corresponding to the weighted interference levels of the cells to be optimised is generated (step ~~408~~ 308), for example, using a "bin count" method known in the field of statistics, and a cumulative density function (CDF) is then generated (step ~~410~~ 310) using the PDF. Step 310 is followed by step 312 wherein the performance of the cells is compared. Step 312 is followed by step 314 wherein the frequency plan is changed to balance the performances. The method then returns to step 300.

- Please add the following paragraphs after the paragraph beginning on page 9, line 2:

Specifically, the method of FIG. 6 starts in step 600 wherein the binomial distribution

$$P(k) = \binom{c}{k} \cdot p^k \cdot (1-p)^{c-k}$$

where c is the total number of cells, k is the number of cells at any given frequency and p is the probability of transmission on a given frequency.

FIG. 5 illustrates an example of a binomial distribution in accordance with the above equation for 19 cells and 6 frequencies.

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Step 600 is followed by step 602 wherein the required number of cells is established.

Step 602 is followed by step 604 wherein an interference matrix is calculated for all cells. The method then proceeds in step 300 wherein a cell is selected for optimisation.

Step 300 is followed by step 302 wherein it is determined if the last cell for optimisation has been optimised. If not, step 302 is followed by step 606. Otherwise, it is followed by step 308.

In step 606 wherein the required number of cells as determined in step 604 are selected by selecting the corresponding number of cells having the worst interference levels.

Step 606 is followed by step 304 wherein the interference level for all possible cell combinations is calculated. Step 304 is followed by step 306 wherein the next cell for optimisation is selected. The method then returns to step 302.

In step 308 a probability density function is calculated for all cells.

Step 308 is followed by step 310 wherein a cumulative density function is calculated for all cells.

Step 310 is followed by step 312 wherein the performance of the cells is compared.

Step 312 is followed by step 314 wherein the frequency plan is changed to balance the performances. The method then returns to step 300.

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